

Appl. No.: 10/723,401
Amdt. Dated: November 1, 2007
Reply of Office action of August 14, 2007

Docket No.: SECH-10159

REMARKS

Claims 1-19 are currently pending in the application. Claims 18 and 19 have been added. Applicant requests reconsideration of the application in light of the following remarks.

Rejections under 35 U.S.C. §102

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegual Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claims 1-17 were rejected under 35 U.S.C. § 102(a) as being anticipated by Zhang et al. (2003/0099762) issued as U.S. Patent No. 7,157,096 to Zhang et al. (hereinafter "Zhang"). Applicant respectfully traverses this rejection and requests reconsideration of the claims.

Zhang discloses a multi-layer coating is particularly useful for the coating of implants such as orthopedic and dental implants, particularly metallic implants. The first layer comprises a bond coating of a **dense** material insoluble and inert in body fluids. The second layer comprises apatite and a binder. The first layer protects the metallic implants from corrosion, apatite dissolution, and interfacial reaction with apatite and the binder. The apatite in the second layer is a bioactive agent that can osteobond to tissue. The binder allows adjustment of the thermal expansion coefficient between the coating and the metallic substrate. This multi-layer coating has both high bond strength to implants and excellent bioactivity with the surrounding body tissue. The binder insoluble in body fluids can be a

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glass, such as, for example, medical glass having a high SiO₂ concentration (i.e., greater than 67.8%).

First and foremost, there is no disclosure in Zhang to a scaffold, bone scaffold and/or porous scaffold. The term "bone scaffold" is recited in Applicant's independent claims 1, 10 and 18.

According to the Examiner, "[a]ll other limitations are self-evident or inherent properties to the materials." Applicant strongly disagrees. Claim 1 recites "a biocompatible porous ceramic substrate." Zhang, on the other hand, discloses a first layer which comprises a bond coating of a **dense** material (paragraph [0027]). The terms dense and porous are polar opposites. Clearly, the term "a biocompatible, porous ceramic substrate," as recited in independent claims 1, 10 and 18, is neither self-evident or inherent. Nor are the terms "average size of pores," as recited in dependent claims 2 and 11; "porosity," as recited in dependent claim 4; and "compressive strength," as recited in dependent claim 5, self-evident or inherent.

Applicant believes that it is not appropriate for the Examiner to take official notice of facts without citing a prior art reference, especially when the facts asserted to be well-known are not capable of instant and unquestionable demonstration as being well-known. Assertions of technical facts in the areas of esoteric technology or specific knowledge of the prior art must always be supported by citation to some reference work recognized as standard in the pertinent art. *In re Ahlert*, 424 F.2d at 1091, 165 USPQ at 420-21. See also *In re Grose*, 592 F.2d 1161, 1167-68, 201 USPQ 57, 63 (CCPA 1979)

Applicant requests that Examiner provide a prior art reference that supports Examiner's statement that "all other limitations are self-evident or inherent properties to the materials." Applicant believes that the Examiner had a chance to include the prior art

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references in his August 14, 2007 Office Action, but chose not to. Because the basis for this rejection is not presented here and would be presented in the next Office Action, Applicant believes that the next Office Action needs to be a Non-Final Office Action (MPEP 706.07(a)).

New independent claim 18 has been added and recites "an inner layer consisting essentially of fluorapatite (FA)." The second layer of Zhang clearly requires a glass binder. New dependent claim 19 has also been added which recites "wherein the step of thermal-treating comprises sintering at a temperature in the range of from about 1200°C to about 1250°C. Support for dependent claim 19 can be found in the specification, as originally filed, on page 12, lines 7-8. The green coating of Zhang, namely the second layer comprising apatite and glass binder, is sintered at temperatures below about 975°C.

Thus, the Zhang reference lacks the positive recitation required of an anticipating reference. Applicant respectfully requests that the anticipation rejection of claims 1-17 be withdrawn.

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CONCLUSION

Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

If any fees, including extension of time fees or additional claims fees, are due as a result of this response, please charge Deposit Account No. 19-0513. This authorization is intended to act as a constructive petition for an extension of time, should an extension of time be needed as a result of this response. The examiner is invited to telephone the undersigned if this would in any way advance the prosecution of this case.

Respectfully submitted,

Date: November 1, 2007

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